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ANNUAL REPORT

OF THE

EASTERN ROCKIES FOREST

CONSERVATION BOARD

FOR THE
FISCAL YEAR

1972 - 1973

GENERAL SCIENCES

CALGARY, ALBERTA
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CALGARY, ALBERTA
MARCH 31, 1973

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EASTERN ROCKIES FOREST CONSERVATION BOARD

908, John J. Bowlen Building

620 - 7th Avenue S.W.

Calgary, Alberta

T2P 0Y9

October 1, 1973

Sir:

I submit herewith the Annual Report of the Eastern Rockies Forest Conservation Board for the fiscal year 1972-73, pursuant to the provisions of The Eastern Rocky Mountain Forest Conservation Act.

An Agreement contained in the Act established the Board with a tenure commencing April 1, 1948, for a minimum of 25 years. As the participating governments have not renewed this Agreement, the Board is terminated March 31, 1973. This is, therefore, the last annual report.

Respectfully submitted,

J. R. H. Hall
Chairman

The Honourable Jack Davis,
Minister of the Environment,
Ottawa.

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J. R. H. Hall
Chairman

The Honourable Dr. Allan A. Warrack,
Minister of Lands and Forests,
Edmonton.

EASTERN ROCKIES FOREST CONSERVATION BOARD 1972-73

MEMBERS

J. R. H. Hall	Chairman, Edmonton, Alberta
A. T. Baker	Member, Calgary, Alberta
H. W. Beall	Member, Ottawa, Ontario

PRINCIPAL OFFICERS

W. R. Hanson	Chief Forester, Calgary, Alberta
J. P. Hourigan	Secretary, Calgary, Alberta

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- "B" – Provincial Auditor's Report with Statements "A", "B", and "C"
- "C" – Statement of Revenue from Surface Rights in the Conservation Area

INTRODUCTION

The Eastern Rockies Forest Conservation Board was established under authority of "The Eastern Rocky Mountain Forest Conservation Act" which was assented to July 17, 1947, and ratified by an Alberta statute assented to March 31, 1948.

Set out in the Schedule to the Act is an Agreement that was subject to approval by the respective governments and which was to take effect on a date to be agreed upon by the Minister of Mines and Resources of Canada and the Minister of Lands and Mines of Alberta. The effective date of this Agreement was fixed by the respective Ministers as April 1, 1948.

The purpose or objects of the Eastern Rockies Forest Conservation Board are:

- (a) to construct, operate and maintain and to supervise the construction, operation and maintenance of projects and facilities required for the conservation of the forests and the protection of the watersheds in an Area¹ forming part of the Rocky Mountains Forest Reserve as defined in the Agreement;
- (b) to protect the forests in the Area from fire, insects, disease and other damage; and
- (c) to conserve, develop, maintain and manage the forests in the Area with a view to obtaining the greatest possible flow of water in the Saskatchewan River and its tributaries.

(The purpose of the Act was stated succinctly by the late, Honourable C. D. Howe in the course of the parliamentary debate on the Bill, as follows: "The purpose of the bill is not primarily to protect the forests, although by protecting the forests we achieve the real object of the bill, which is to protect the runoff in the headwaters of the Saskatchewan").²

The Board's preliminary studies indicated that a policy under the Act of "obtaining the greatest possible flow of water in the Saskatchewan River and its tributaries" would have been dangerous and likely to cause

¹ The Conservation Area contains approximately 9,000 square miles on the East Slopes of the Rocky Mountains bounded by the National Parks of Waterton Lakes, Banff and Jasper, and by the Brazeau-Athabasca divide.

² Hansard, 1947, p. 5067.

floods and erosion at certain seasons of the year, followed by unacceptably small flow at others. Therefore, the Board's policy has been to manage the Conservation Area for optimum flow.

By inference of the Act, water is the most important product of the Conservation Area and watershed management is, therefore, of primary concern. The board has adhered to the principle that watershed protection and improvement may be attained along with the utilization of the other resources, hence a policy of managing the Conservation Area on a multiple-use basis has been accepted.

In the Agreement drawn up between the two governments the first seven years of the Board's operation were designated the "capital period" and were characterized by a federally-financed, multi-million dollar development program. Following this period the Board handed over the product of its development program to the Alberta Forest Service to administer and operate.

The Agreement contained two conditions regarding the lifetime of the Board: (1) that tenure was for a minimum of 25 years; and (2) that the Agreement may be terminated at the end of that period, or any year thereafter, by either government giving one year's notice in writing of its intention so to do. In March, 1972, the Government of the Province of Alberta gave notice that it intended to terminate the Agreement on March 31, 1973. In giving notice the provincial government conveyed the appreciation of the people of Alberta to the federal government in jointly initiating the programs of resource management which evolved principles and policies for the conservation of Alberta's natural resources.

The Government of Canada in accepting the notice of termination expressed its appreciation to the past and present members of the Board for their excellent guidance and leadership in improving resource management practices, and added that the staff of the Board deserves strong appreciation for a job well done.

TIMBER MANAGEMENT

No new major long term timber dispositions were made in the past year because of the impending hearings by the Environment Conservation Authority which may result in future modifications to land use priorities in the forests of the Eastern Rockies.

Strong markets for forest products during the year resulted in a considerable increase in production by existing quota holders and by timber permittees. Lumber production increased by almost twelve million board feet, and round timber production (primarily fence posts) was double the 1971-72 production. The production of all other forest products except slabs, fuelwood and lath was significantly higher.

Utilization continued to improve. The incentive of quota free production plus increased technology in the equipment field has resulted in more companies producing small roundwood off their limits which previously had experienced only a sawlog cut.

A commercial scale poplar harvesting operation commenced in Management Unit R 4. Poplar is being used for the manufacture of pallets and boxes. The operation to date has been considered very successful and timber utilization has been good. A total of 460 acres will be harvested per year yielding some 3 million board feet.

The prevailing strong lumber market enabled the industry to make several improvements in the way of equipment and installations. Four new sawmill complexes were constructed or being constructed during the year. They are:

1. Spray Lakes Sawmills at Cochrane (still under construction)
2. Johnson Brothers at Cowley
3. Revelstoke Companies Ltd. at Harlech
4. Murrery Brothers at Ricinus

In addition to the above, weigh scale installations for the purpose of wood measurement were installed at the following locations:

1. Johnson Brothers at Cowley
2. Murray Brothers at Ricinus
3. Revelstoke at Harlech

Continued emphasis was placed on reforestation of cut areas, and on improved planning and supervision of timber harvesting to insure the protection of watershed and recreation values.

Reforestation and Stand Improvement

Reforestation and stand improvement by the Alberta Forest Service in the Conservation Area is summarized in the following table:

Forest	Scarified Acres	Seeded Acres	Conventional Seedlings Planted	Container Seedlings Planted	Thinned Acres	Cones Collected Bushels
Crowsnest	370	180	2,500	113,000	5	642.7
Bow River	*213	-	-	-	-	-
Rocky Clearwater	531	568	23,500	160,200	7	121

* of which 20 acres were control burned

Reforestation and stand improvement work by quota holders in the Conservation Area is summarized in the following table:

Forest	Scarified Acres	Seeded Acres	Planted Acres Containers	Conventional	Cone Collection Bushels
Crowsnest	-	-	-	-	-
Bow River	120	-	-	-	-
Rocky Clearwater	60	-	-	-	20

Timber Quotas

The Coniferous Timber Quota system was established as of May 1st, 1966. At the end of the first 5-year period on April 30, 1971 some Quotas had been cancelled for failure to produce 40% of the authorized quota volume, others were subject to penalties for under production and the majority produced close to the target volumes.

The status of Quotas in the Conservation Area is listed below:

	Crowsnest Forest	Bow River Forest	Clearwater Rocky* Forest	Total Conservation Area
Number of Quotas May 1, 1966	13	23	34	70
Number of Quotas sold since May 1, 1966	1	12	1	14
Number of Quotas Merged since May 1, 1966	3	13	4	20
Number of Quotas Cancelled since May 1, 1966	1	6	7	14
Current Number of Quotas	10	16	33	59
Current Annual Cut authorized by Quotas MCF	5,280	4,430	6,201	15,911
Annual Allowable Cut MCF	7,659	19,994	38,600	66,253
Quota Cut as % of Allowable cut	69	22	16	24 (av.)

* Includes E 11 Management Unit although this unit has been deleted from the Conservation area and added to the Edson Forest.

In 1972-73 the R4, R5, R6, R7 and R8 Management Plans were revised and approved with the help of new photography, Quota Reconnaissance typing, mapping and cruising. Accordingly, all Management Plans in the Rocky-Clearwater Forest are up-dated.

Plan revisions in the Bow River/Crowsnest Forest (total of 9 Management Units) will continue after completion of Quota Reconnaissance typing, mapping and cruising which are now proceeding on a top priority basis.

The results of the recent Environmental Conservation Authority Hearings on the Eastern Slopes will also play an important role in management planning in these areas. With the increased recreational demand of a growing population the Conservation area will require intensive planning. Hopefully, timber operations can exist as a compatible land use along the eastern slopes.

Timber Production

Statistics on timber licenses, timber permits and production of lumber and related products in the Rocky Mountain Forest Reserve as reported by the Alberta Forest Service for the year under review are noted hereunder:

Number of Timber Quota Certificates Offered for Sale	1
Quota Volume Offered for sale	275,000 cu. ft.
Number of Timber Licenses granted to Quota Holders	13
Volume of Timber granted to Quota Holders	18,117,448 cu. ft.
Number of Timber Licenses offered for sale	—
Volume of timber sold by license	—
Number of salvage timber licenses granted	—
Volume of salvage timber granted	—
Number of Special Timber Permits Issued	6
Volume of timber sold by special timber permit	96,869 cu. ft.
Number of Commercial Timber Permits issued	—
Volume of timber sold by Commercial Timber Permits	—
Number of Miscellaneous Timber Permits issued	369
Number of Local Timber Permits issued	10
Number of tags (Permit to remove trees) issued	1,433
Number of Active Timber Licenses	60
Number of Active Special Timber Permits	11

Production of Lumber and Related Products

— Lumber	55,402,285 FBM
— Round timber	1,008,665 cu. ft.
— Slabs and fuelwood	644.71 cords
— Lath	560,100 pieces
— Trees for transplanting	794
— Christmas trees	6,385

FOREST LAND USE

Watershed Management

The control of soil erosion and the protection of stream environments continued to be primary concerns of the Branch. These concerns were reflected in the conditions applied to industrial operations in the Rocky Mountains Forest Reserve.

Upon termination of the Board, the Branch will assume responsibility for operation and maintenance of precipitation storage gauge networks established in the Forest Reserve and in the Swan Hills.

Information regarding soil erosion and stream damage hazards, much of which was available in the E.R.F.C.B. Conservation Unit Guides, was assembled for the Foothills Resource Allocation Study.

Joint inspections with Timber Management Branch were made to assess the watershed implications of proposed timber sales in the Gardiner Creek and Poll Haven areas. Watershed problems associated with logging operations in the Racehorse Creek watershed were reviewed and discussed with field staff.

Watershed Research

Management coordination for the Alberta Watershed Research Program continued. A status report was prepared concerning coal leases in the Marmot Creek Experimental Basin. Workers under the Priority Employment Program were assigned to the James River Snow Accumulation Study.

The Branch continued to place emphasis upon applied research pertaining to strip mining for coal. Reclamation trials were conducted by field staff and research plots were established at Tent Mountain and Racehorse Creek. The objective was to assess the feasibility of common reclamation practices at high elevations in coal strip-mined areas. Results of these experiments will be evaluated in 1973.

A major report entitled "Reclamation of Coal Strip-Mined Areas in the Foothills and Rocky Mountain Region of Alberta" was prepared. A report summarizing five years of reclamation research by the A.F.S. was completed. A report on the reclamation possibilities in the Nordegg area was also prepared.

A course in Land Reclamation was presented at the Forestry Training School at Hinton, and an outline for future courses was prepared.

Watershed Restoration

Reclamation of sites and access trails utilized for coal exploration and geophysical work is being carried out progressively with these programs. Reclamation consists of partial debris disposal, cross-trenching, trails, restoring the normal drainage pattern, and re-establishing a growth of vegetation (grass) on all of the denuded area.

One old abandoned millsite on Beaver Creek in the Porcupine Hills district of the Crowsnest Forest was restored at a cost of \$2,075.00. All sawmill waste was burned and buried and the area seeded to grass and fertilized. An additional three abandoned millsites in the Clearwater-Rocky Forest were restored in the same manner.

The Alberta Forest Service's responsibility for erosion control in the Strachan-Prairie Creek vicinity of the Clearwater-Rocky Forest has been discontinued due to a shortage of funds as were provided by Industry through a \$30.00 per mile erosion control assessment. Restoration and stabilization of seismic lines has been achieved except for a few minor locations.

Geophysical Exploration Gas and Oil Development

Geophysical activity declined during this fiscal year. One hundred and eighty two (182) miles of new seismic lines were constructed.

Oil and gas development remained fairly constant throughout the Conservation Area. The following table illustrates total producers, wells drilled and abandonments in 1972-73. Major activity is wild-cat drilling of promising gas bearing structures.

Forest	Total of Producing Wells 1972-73	Wells Drilled 1972-73	Abandoned Wells 1972-73
Crowsnest	34	3	1
Bow River	45	13	4
Clearwater-Rocky	33	6	3
	112	22	8

Coal Exploration

Coal exploration activities declined slightly within the Conservation Area. Twelve (12) coal exploration programs were approved.

Major activity involves the future deliniation of known coking coal outcrops along the outer range in the foothills belt.

Other Mineral Exploration

One Copper exploration program took place between Yarrow Creek and Spionkop Creek in the Crowsnest Forest.

Recreational Planning

No new site plans were approved by the Board during 1972-73 as new construction was concentrated on the expansion and upgrading of existing areas.

A total of thirty-two recreation area plans have been approved with facilities to accommodate 520 picnic units, 403 tent units and 272 trailer units. A summary of Board approved Recreation area site plans indicating facilities and services is shown in Appendix A.

The freeze imposed on all types of recreational dispositions within the Area pending completion of the Foothills Resource Allocation Study and Environment Conservation Authority Hearings was continued throughout 1972-73.

Multiple Use Planning

This section was responsible for coordination and conduction of two Canada Land Inventory projects:

1. Land Capability for Forestry, C.L.I. Project 48018
2. Foothills Resource Allocation Study, C.L.I. Project 38015

Land Capability for Forestry - C.L.I. Project 48018

Competition for land for alternative uses, and increased government economic and social planning, has made apparent the need for improved knowledge of the productive capability of Canada's lands, their location and their extent. In view of these facts a co-operative federal-provincial program was undertaken namely the Canada Land Inventory. This program was administered under the Agricultural Rehabilitation and Development

Act (ARDA) of June 1961. The Canada Land Inventory being a comprehensive survey of land capability for forestry, agriculture, recreation, wildlife and present land use was designed to provide a basis for resource and land use planning. The land capability classification for forestry for Alberta's portion, including the east slopes forest conservation area was initiated in 1965 and was completed in March 1973. The extent and the agencies responsible for completion of various areas are shown on the accompanying map.

Foothills Resource Allocation Study - C.L.I. Project 38015

Objectives

The Foothills Resource Allocation Study was initiated under a joint Federal-Provincial C.L.I. Pilot Land Use Planning Program in 1970. This study is being carried out in an attempt to evaluate and appropriately allocate the resources of western and southwestern Alberta, the Rocky Mountain foothills region. It is expected that the Study will provide the government of Alberta with a design which will help define the most beneficial allocation of the renewable and non-renewable resources of the region in order that all of the provincial agencies may program their activities about this plan.

The Study Region

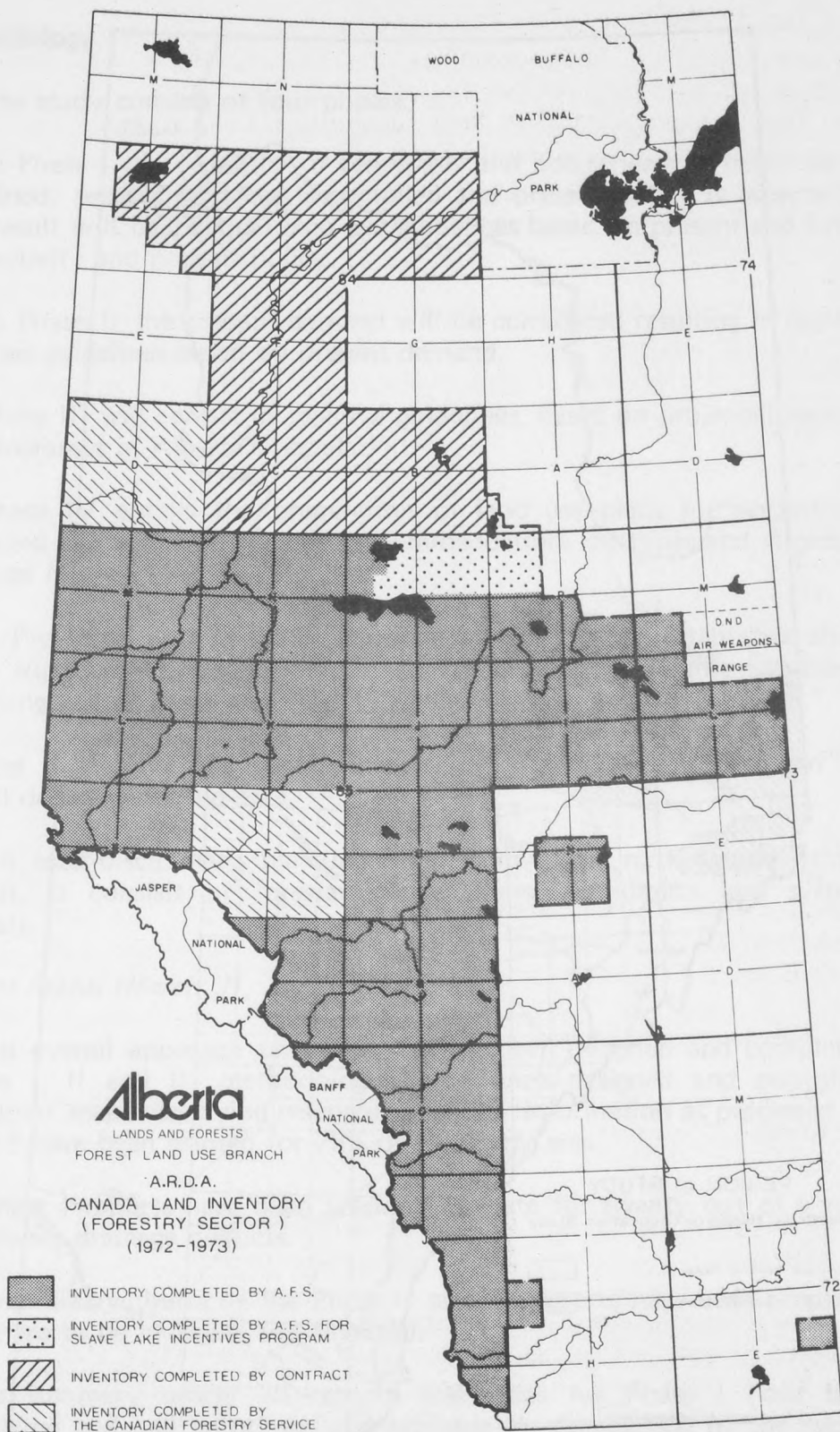
The foothills region includes two major units of land in the western and southwestern part of the province. The southern foothills, comprised of all Green Zone lands and transecting white zone corridors in the Upper Saskatchewan River System is the initial area. The northern foothills, including much of the Smoky and part of the Athabasca River systems, constitutes the extension area added as of April 1, 1972 (see map).

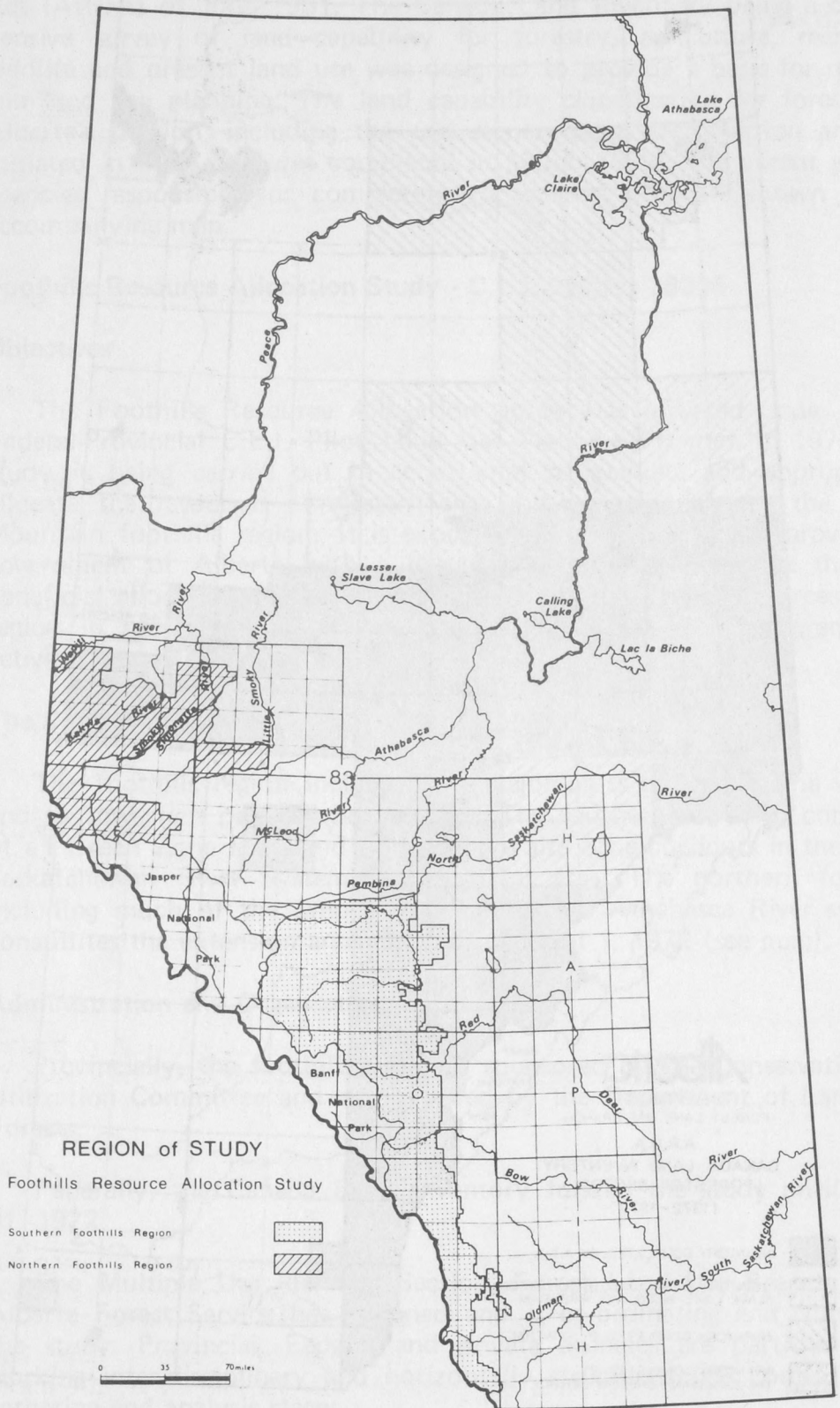
Administration and Organization

Provincially, the foothills Study is sponsored by the Conservation and Utilization Committee and administered by the Department of Lands and Forests.

Federally, the Canada Land Inventory funded the study until March 31, 1972.

The Multiple Use Planning Section, Forest Land Use Branch of the Alberta Forest Service has designed and is co-ordinating and completing the study. Provincial, Federal and private agencies are participating as working inter-disciplinary and horizontally structured task forces in data gathering and analysis stages.





Methodology

The study consists of four phases.

In Phase I the potential of renewable and non-renewable resources are examined, present land use is compiled and present policy is ascertained. The result will be regional land use guidelines based on present and future productivity and present policy.

In Phase II the present demand will be considered resulting in regional land use guidelines based on present demand.

Phase III will consist of regional guidelines, based on projected demand with increases in Alberta's population.

Phase IV entails the preparation of land use plans for present and projected demands and includes recommendations on types and staging of land use in the Foothills.

A Provincial data bank for resource information was established and is being supplied with data by this study. Computer systems capable of retrieving and processing these data were developed and put into use.

The CALCOMP computer mapping facility has been adopted for spatial depiction of the data.

An inter-disciplinary planning team is involved in the study of this project. It consists of foresters, geographers, economists and systems analysts.

Project Status (March 31, 1973)

An overall approach to the study has been designed and completed. Phases I, II and III methodologies have been designed and published. Computer maps displaying resource capability information as processed for Phase I have been printed for 75% of the study area.

Phase I reports have been prepared to date for twenty out of a total twenty six drainage districts.

Preliminary drafts of the Phase II and III reports have been prepared. These are to be reviewed and finalized.

In summary nearly all reports and maps for Phase I have been completed and will be printed and available for distribution by the middle

of summer 1973. The economic analyses (Phase II and III) are near completion and will be finalized towards later part of summer 1973. The methodology for Phase IV is in the process of development.

GRAZING

The following report is compiled from reports and records submitted by the Bow/Crow, Clearwater-Rocky Forests and the Forest Land Use Branch of the Alberta Forest Service.

Summary

The weather conditions in the reserve were somewhat more moist and cooler than in previous years resulting in an almost ideal forage growth condition. Spring was late but a state of range readiness was reached on most of the allotments by turn-in time. Higher elevation ranges in some areas had a shorter growing period this year due to below normal temperatures but this did not impair growth to a great extent.

The actual use for 1972 was 82,424 animal unit months compared with 81,066 for 1971.

Grazing revenue for the year amounted to \$76,080.96 for 268 permits on 88 allotments not including those allotments which were unused. Grazing fees were \$1.05 per A.U.M. in the Porcupine District and \$.85 per A.U.M. in the rest of the Forest Reserve.

Range Condition

Bow/Crow Forest - Crow Section

The Crow section reported an overall good condition with some prime areas falling into poor and fair conditions. In some areas the trend of the valley bottoms still appears to be downward while in other areas an upward trend has started. The downward trend is attributed to poor distribution and increased pocket gopher activity.

Bow/Crow Forest - Bow Section

The general condition of the range in the Bow section was reported as fair to good. The fair and poor condition areas were again limited to valley bottoms. This is especially evident in the Sheep District. This area experienced three consecutive years of drought and initial observations indicated this downward trend had been reversed but heavy wet snows late in the season led to severe trampling and soil compaction damage. An interesting note is that one area in poor condition along Willow Creek is attributed to public use pressure. Generally speaking however most fair and poor condition areas are a result of management inefficiencies by the permittees.

Clearwater-Rocky Forest

Range condition was reported as good with only localized areas in fair and poor condition. These again appear to be management problems, specifically lack of riding by the permittees.

Grazing Records

Comparisons between years in Crow and Bow sections should not be made, as Willow Creek, Shepherd Stimson, Pekisko and Timber Falls allotments which were formerly in the Crowsnest Forest are now considered part of the Bow section.

Total Number of Cattle Under Permit

Forest	Yearlings		Mature (Incl. bulls)		Total	
	1971	1972	1971	1972	1971	1972
Crow Section	8,233	7,107	6,281	5,567	15,054	12,674
Bow Section	1,967	3,863	6,579	7,438	8,546	11,301
Clearwater-Rocky	192	292	825	849	1,017	1,141
	10,392	11,262	14,225	13,854	24,617	25,116

Total Number of Horses Under Permit

	1971	1972
Crow Section	nil	nil
Bow Section	192	211
Clearwater-Rocky	47	35
	239	246

Total Number of Grazing Permits Issued

	1971		1972
Crow Section	171	cattle	157
Bow Section	76	cattle	91
	4	horses	4
Clearwater-Rocky	12	cattle	12
	2	horses	2
TOTAL	265		268

Actual Use in A.U.M.'s*

	1971	1972
Crow Section	45,086	39,645
Bow Section	32,632	38,354
Clearwater-Rocky	3,348	4,425
TOTAL	81,066	82,424

*includes use by animals under permit plus known outfitter and rider horses not under permit.

Revenue from Grazing Permits

	1971	1972
Crow Section	\$41,973.48	\$37,464.82
Bow Section	26,939.00	34,752.70
Clearwater-Rocky	3,380.45	3,863.44
TOTAL	\$72,292.93	\$76,080.96

SUMMARY

	1971	1972
Revenue	\$72,292.93	\$76,080.96
Number of Livestock	24,856	25,362
Number of Allotments	88	88
Number of Permits	265	268
Average Number of Permits/Allotment	3	3
Average Number of Livestock/Allotment	282	288
Average Number of Livestock/Permit	94	95
Average Amount of Revenue/Allotment	\$821.51	\$864.56
Average Amount of Revenue/Permit	\$272.80	\$283.88

Figures do not include non-use permits or allotments which were not used.

Livestock Losses

	Numbers Lost	
Cause of Loss	1971	1972
Poisonous Plants	26	24
Predators	1	54
Lightning	8	1
Hunters	-	-
Automobiles	3	2
Drowning	-	-
Natural & Unknown (includes possible theft, missing, or strayed)	100	120
TOTAL	<u>138</u>	<u>201</u>

Recorded losses of .8% are near the long term average. The extremely high predator loss was almost entirely (all but 1) in the Ghost Ranger District. These were mainly calf losses which were attributed to wolves, possibly not all were killed by wolves but many were definitely proven to be and the wolf population in the area is much higher than it has been for many years. It is gratifying to see the death losses from larkspur continue to decline.

Division of Range

Crow Section

Field No. 1 of the Ewing Allotment is now considered part of the Hardwick Coulee Allotment. A permittee who formerly ran cattle in both Lookout Butte and Ewing now has exclusive use of the latter allotment. One permittee was transferred from Hardwick Coulee to Lookout Butte to enable exclusive use by one permittee of the Hardwick Coulee allotment. Lookout Butte still has three permittees but two of these were new in 1972. The Andrews Coulee D.U. in this allotment has not been divided into two D.U.'s.

Use of the Chimney Rock Field (No. 3) of the Chimney Rock Allotment will be discontinued as soon as arrangements can be made. The major reasons are for watershed and wildlife range protection.

Bow Section

The Pekisko, Shepherd-Stimson, Timber-Falls and Willow Creek allotments were transferred to the Bow Section from the Crow Section and are now administered by the Turner Valley Ranger District.

The boundary change on the Jumping Pound allotment is now finalized with final changes in the Stoney Indian Reserve Boundary.

The Coxhill Creek D.U. in the Jumping Pound allotment will be opened to grazing in 1973 with a review of the effects of grazing on silviculture practices carried out at the end of the season.

Clearwater-Rocky

The Elk-Idlewilde and Seven Mile Cutoff allotments were combined into the Clearwater Range allotment to facilitate better management.

Range Improvement

Crow Section

Improvements during 1972 included:

1. Two spring and trough water developments.
2. One Forest Reserve Boundary fence replacement.
3. One new allotment boundary fence.

4. Three distribution unit drift fences.
5. Six cattle guard installations.
6. Restoration by reseeding of four old millsites.
7. One control burn to make previously ungrazing rough fescue sites more palatable. This type of project again proved to be very satisfactory.
8. A brush removal project on the Waldron Co-op lease under the Lands Division is now in progress. This project is being watched with interest to determine possible application of a similar treatment in the Forest Reserve.

Bow Section

The following improvements were carried out in 1972:

1. Four cattle guards were installed.
2. Herbicide applications for control of larkspur and thistle were carried out in the Fish Creek allotment and for control of scabiosa in the Jumping Pound allotment.

Clearwater-Rocky

No improvement projects were carried out in 1972.

Management and Carrying Capacity Changes

Crow Section

Jim Heath - enter yearlings only on Jim Creek
 Olin Creek - change entirely to yearlings
 Star Creek - substantial cut with deferred entry
 Outer Gap - July 1st entry
 Burke Creek - June 15th entry
 Upper Spring - July 1st entry
 Jackson Creek - July 1st entry
 Southend - July 1st entry

Bow Section

No changes were made reducing the carrying capacity but several minor adjustments were made within allotments and in the system of use employed.

Clearwater-Rocky

The Clearwater allotment was reduced to 2,250 A.U.M. from 2,740. This reduced stocking rate is still above the actual use being made of the area.

Game Range and Watershed Protection

Crow Section

The Fish and Wildlife Division continued the "Cooperative Forage Resources Study" in the Bobs Creek vicinity. This study should be completed in 1973 and a new management plan completed for the Bobs Creek allotment in 1974.

Former allotments or portions thereof closed to domestic grazing in favor of game range and/or watershed protection are:

1. Glacier Creek
2. York Creek
3. Gladstone Creek
4. Nez/Perce Creek
5. Headwaters of Daisy Creek
6. Station Creek

Bow Section

No serious competition between livestock and wildlife is reported. Most of the game ranges are in good condition.

Areas closed to domestic grazing are as follows:

1. Kananaskis District.
2. Ya-Ha-Tinda area with the exception of Federal Crown Land.
3. Headwaters of Waiparous, Ghost, Fallentimber and Burnt Timber Creeks.
4. Sheep Creek and the headwaters of Wigwam and Fisher Creeks in the Red Deer District.
5. Eagle Creek watershed.
6. Upper Sheep Distribution Unit in the South Sheep allotment.

Clearwater-Rocky

All areas in this forest, that are grazed, are only stocked at a 50% rate to ensure game range protection. No areas of serious livestock-wildlife competition or watershed damage were noted.

Range Survey

Seven allotments were surveyed during 1972.

Crow Section

Chimney Rock and Upper Livingstone

Bow Section

Wilson Creek and Williams Creek

Clearwater-Rocky

Moose Creek, Limestone and Rough Creek

Stock Associations

Cooperation between the stock associations and the Alberta Forest Service remained good to excellent during 1972. An extremely successful joint inspection was carried out between the Burke Creek Stock Association and three representatives of the A.F.S. Their cooperation in implementing the new range management plan was much appreciated. With this kind of mutual cooperation, major problems soon become minor.

Comparisons

In the last year of the Eastern Rockies Forest Conservation Board, it might be interesting to make some comparisons between the initial year of control (1947) and the present.

	1947	1972
Number of Cattle	22,269	25,116
Number of Sheep	4,183	nil
Number of Horses	1,025	246
A.U.M.'s of Grazing	128,903	82,424

Comments

As one of the aims was to equitably distribute the grazing privileges, we most certainly have accomplished this because we are now running more cattle than in previous years and have more permits.

Sheep grazing has been discontinued which is likely wise from wildlife and watershed viewpoints but has hastened poplar and willow invasion as a result. This increase of woody plants, by elimination of sheep grazing, is very minor compared to that caused by elimination of wildfire.

Much has been gained in the area of horse grazing. This is typically a winter operation and generally the horses were left on the range during critical range periods. We have now implemented an April 30th removal date which protects the range and watershed during the critical early growth stages.

Generally entry dates are late to allow for a state of range readiness to be reached well in advance of entry. The May 15th entry, when the E.R.F.C.B. was formed, has now been set back to June 15th with a July 1st entry on mountainous allotments.

CONSTRUCTION AND MAINTENANCE

The Department of Highways erected a 112 foot steel bridge and two 28 foot relief spans across the Elbow River on the Jumping Pound Road.

A footbridge was erected across the Saskatchewan River for access to the Siffleur Wilderness area.

Temporary bailey bridge was erected across Mist Creek on the Forestry Trunk Road, replacing a broken 48 foot wooden truss.

Five miles of the Meadow Saunders Road was upgraded.

Twelve and a half miles of the Thunder Lake Road was upgraded.

Improvements to switchbacks were undertaken on the Red Deer Access Road.

A 180 foot precast concrete bridge was erected across the Oldman River on the Forestry Trunk Road and approximately one mile of bridge approach road relocated to the bridge.

A 26' and 36' concrete trailer pad and 70 lineal feet of sidewalk and 120 lineal feet of curb and gutter were poured at Turner Valley Ranger Station.

A water-pump house was constructed at Elbow Ranger Station.

A new prefabricated lookout cabin was placed at Mockingbird Lookout.

A new water well drilled, a water cistern and well house were constructed at Nordegg Ranger Station.

FIRE PROTECTION

A total of 35 fires were recorded within the Conservation area during the 1972 calendar year as compared with 72 during the preceding year. The area burned over amounted to 130 acres as compared with 399 acres during 1971.

Fires by Cause	Total Fires		Percent	
	1972	1971	1972	1971
Lightning	5	43	14.3	59.7
Recreation	21	17	60.0	23.6
Public Projects	3	2	8.6	2.8
Other Industries	2	1	5.7	1.4
Forest Industries	3	8	8.6	11.1
Unclassified	1	1	2.8	1.4
Settlement	—	—	—	—
Incendiary	—	—	—	—
TOTAL	35	72	100.0	100.0

Fires by Forest	Number	Area Burned
Crowsnest	—	—
Bow River	26	6
Clearwater-Rocky	9	124
Total	35	130

RESEARCH IN THE CONSERVATION AREA

The Board has been involved in research, both directly and indirectly since its beginning. The Act authorized it to carry out research and scientific investigations and to arrange with agencies within Canada to perform necessary research. The staff was never built up sufficiently for carrying out all the necessary research, and other agencies were relied upon to perform scientific research requiring special training. The board gathered basic information and performed certain experimentation and investigation to assist in management planning. Beyond this, arrangements were made with agencies to gather hydrologic and meteorologic data and to carry out silvicultural and other forest research. However, the greatest need for research to supply management information was in the field of watershed management, yet there was no single agency in Canada organized for doing watershed management research. The Board was instrumental in organizing a multi-agency, cooperative research program involving some dozen federal and provincial agencies.

The following research of investigational projects were undertaken by the Board over the years:

1. Feasibility of establishing forest cover on grass covered slopes and river flats;
2. Species and methods of planting and seeding for reforestation of cut-over forest land;
3. Revegetation of salt licks on cattle range;
4. Assessing condition and trend on cattle and wild ungulate range, including the setting up of permanent exclosure plots and transects which are read periodically by the techniques developed in the study;
5. Methods and species for restoring depleted cattle range;
6. Restoration of watershed condition on eroded range;
7. Roadway cut and fill stabilization with vegetation;
8. Water supply development for livestock and game animals; and
9. Weed and brush control on livestock range.

The above projects were designed and carried out to supply information in solving problems or improving practices of resource use. In most cases the project was completed and discontinued when it had served its purpose, but the results obtained continue in management practices. In the case of assessing condition and trend on cattle ranges, the methods developed and the plots and transects are part of a continuing project used as a means of evaluating the degree of success in range management.

The most pressing need for basic information and methods was in watershed management. Almost no watershed research had been carried out in Canada before 1960 and even elsewhere the work was new. The Board solicited assistance from federal research agencies in this field in the early 1950's but no single agency was organized to perform the needed research. Through continued efforts by the Board it was decided to investigate the feasibility of a multi-agency approach to watershed research in which the expertise of different branches of government could be used. Out of a conference called by the Forestry Branch in 1959 came the East Slopes Watershed Research Program. Through the cooperative effort of various agencies a program of research to assist in watershed management was developed. It has grown over the decades and is now called the Alberta Watershed Research Program.

The Board's research work in the 1972-73 fiscal year has been largely completion of projects, writing up of the reports and arranging for unfinished work to be taken over by other agencies. Reports have been written on the forage production study in Streeter Basin (part of the watershed study of the aspen-grasslands), the erosion study in the Swan Hills, the snow accumulation study on Plateau Mountain and the study of snow accumulation and snowmelt under managed timber cutting in the Castle River headwaters. Also, in the present fiscal year the Marmot Creek Watershed Research Basin study has been brought to the stage where a prescribed timber harvest is to take place. The Board's part in this phase of the work in the 1972-73 fiscal year was supervising the building of a road network. This work is now completed.

CANADIAN FORESTRY SERVICE

During the past twenty-five years the Canadian Forestry Service has conducted research and provided demonstrations into nearly all aspects of silviculture and silvical requirements for the species and cover types common to the Conservation Area. Some of the earliest regeneration experiments in Alberta, utilizing prescribed fire and mechanical scarification were initiated in the Crowsnest Forest and the Kananaskis Forest Experiment Station. The results of these studies, established in the late 1940's and early 1950's have found wide application throughout the forested areas of Alberta. Similarly the earliest harvest cutting experiments in spruce and thinning experiments in lodgepole pine were conducted on the Conservation Area. The knowledge gained from these experiments, and from many basic investigations of the silvics and ecology of lodgepole pine and white spruce, conducted at the Kananaskis Forest Experiment Station, form the basis of silvicultural practice in Western Alberta.

Although many of these early studies served their purpose and are now terminated, investigation and demonstration of new silvicultural techniques continues on the Conservation Area. Regeneration experiments utilizing modern methods of controlled burning and scarification are just being completed at the Kananaskis Forest Experiment Station while field trials of various types of "container" seedlings are continuing. In addition, long-term spacing and thinning trials have been recently established in dense lodgepole stands in the Bow River Forest. Promising results are being obtained utilizing modern mechanical strip-thinning techniques.

Kananaskis Forest Experiment Station was one of 11 stations across Canada chosen for a study of fire weather parameters. Weather data from 1939 to 1960, and results of test fires conducted at the station in the early 1950's, were used in the preparation of Forest Fire Danger Tables for the Alberta East Slope.

A major fire behavior study was conducted in lodgepole pine slash in 1969, 1970 and 1971 during which 20 one-acre plots were experimentally burned. Research burns were conducted with the assistance of the Alberta Forest Service, who participated as advisers and provided trained suppression crews during burning periods. The results of the study were published as N.F.R.C. Supplement One to the Canadian Forest Fire Behavior System, which is aimed at providing an accurate prediction of fire behavior in major fuel types.

The Alberta Watershed Research Program is the vehicle for watershed research in the East Slopes. Since 1959, this program has been the focal point of forest hydrology research within the Canadian Forestry Service,

which has supplied the services of the Research Co-ordinator and up to six research scientists. Studies undertaken by this group have ranged from finely detailed basic process description to gross quantification of observable effects.

In the early years of the research program, efforts were mainly toward gaining an understanding of the role of vegetation in the hydrologic cycle, and some indication of how important this manageable parameter is in the forest types found in Alberta. Spot assessments of infiltration, interception, litter properties, evaporation, snow accumulation — melt, runoff and erosion confirmed that in general the same hydrologic process operated in Alberta as elsewhere. However, three factors were found that make the application of these processes difficult in Alberta; the dominance of northward and eastward flowing streams; the preponderance of local groundwater and complex geology in determining the runoff regime of any given small catchment; and the local climatic erratics caused by chinook winds.

No blanket rules or guidelines for watershed management within the East Slopes has or even is likely to emerge from the research program. The diverse range of local climates found within the foothills precludes broad generalizations. Each river basin and its associated watershed must be considered as an entity and its management carefully planned to meet the needs of both watershed and water user. The question "how to manage Alberta's wildlands for water" has no simple answer.

The Canadian Forestry Service stands ready to advise the land use planner and manager with respect to purposeful watershed manipulation. The forest hydrology research team has developed "feel" for the interactions between land use and water production. This experience can be used to qualitatively assess various land use plans and recommend as to their suitability to meet both on-site and downstream water users' requirements.

It is our aim to reduce the subjectivity of this advice in future years through the testing and subsequent use in planning of process based hydrological simulation models. These tests will be conducted on experimental watersheds that were started by the Eastern Rockies Forest Conservation Board.

In the past 25 years the Forest Insect and Disease Survey has provided an annual service in detecting, identifying and reporting harmful forest insects and diseases throughout the conservation area. Outbreaks of spruce beetle, white pine blister rust, *Atropellis* canker, dwarf mistletoe, root rot and red belt were intensively dealt with in this period. Delineation,

damage appraisal and hazard data were subsequently made available to the Board.

During a severe outbreak of spruce beetles in the southern sector of the conservation area, the Insect and Disease Survey provided additional information in the form of current volume loss of timber estimates and potential hazard forecasts in the area. The survey made recommendations on timber salvage, sanitation cutting and beetle control practices.

As a result of information supplied by the Forest Insect and Disease Survey, the Board was able to include in its annual report, a comprehensive outline of insect and disease conditions in the forests of the Eastern Rockies.

RECREATION AREA

Facilities and Services

Board Approved Recreation Area Site Plans				Facilities and Services					
	Picnic Section	Tent Section	Trailer Section	Boat Launching	Developed water well	Wood Supply	Caretaker Services	Weekly Cleanup Inspection	Shelter
Ram Falls	50	30	20	—	x	x	x	—	x
Fish Lake	20	11	19	x	x	x	x	—	x
Upper Shunda Creek	20	15	5	—	x	x	—	x	—
Eau Claire	10	8	20	—	x	x	—	x	x
Cat Creek	8	10	13	—	x	x	—	x	x
Cataract Creek	10	10	—	—	x	x	—	x	x
Burnt Timber	10	10	8	—	x	x	—	x	—
Gooseberry Flat	30	10	9	—	x	x	—	x	—
Kananaskis Lakes	—	18	—	x	x	x	—	x	—
Beaver Flat	36	10	8	—	x	x	—	x	x
Spray Lakes	—	21	—	x	x	x	—	x	—
Red Deer River	12	15	20	—	x	x	—	x	x
Livingstone Falls	40	12	4	—	x	x	—	x	x
Racehorse	40	10	6	—	x	x	—	x	x
Lynx Creek	20	10	6	—	x	x	—	x	—
Wiparous Creek	10	18	18	—	x	x	x	—	x
James Wilson	10	5	10	—	x	x	—	x	x
North Ram River	10	10	—	—	x	x	—	x	—
Chinook	—	19	12	x	x	x	—	x	x
Deer Creek	10	—	—	—	—	x	—	x	x
Dutch Creek	20	16	8	—	x	x	—	x	x
Seven Mile	10	10	8	—	x	x	—	x	x
Prairie Creek	10	10	10	—	x	x	—	x	x
Allison	10	9	8	—	x	x	—	x	x
Indian Grave	10	9	9	—	x	x	—	x	x
Blue Rock	10	13	—	—	x	x	—	x	—
Beaver Mines Lake	50	30	20	x	x	x	—	x	—
Sibbald Flat +	18	14	14	x	x	x	—	x	x
Castle Falls	10	12	6	—	x	x	—	x	—
Oldman River *	24	10	—	—	x	x	—	x	x
Goldeye Lake	—	8	5	x	x	x	—	x	—
Peppers Lake	10	10	6	x	x	x	—	x	—
	528	403	272						

+ Combines areas formerly known as Sibbald Lake and Sibbald Park

* Group Camping facilities also provided (24)

x Facilities provided free

GOVERNMENT OF THE PROVINCE OF ALBERTA

OFFICE OF THE PROVINCIAL AUDITOR

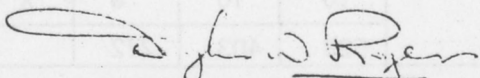
EDMONTON, May 31, 1973

AUDITOR'S REPORT

Eastern Rockies Forest Conservation Board
EDMONTON, Alberta

I have examined the Balance Sheet of the Eastern Rockies Forest Conservation Board as at March 31, 1973, and the Statements of Maintenance Expenditure and Government of Canada and Government of the Province of Alberta Equity for the year then ended. My examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as I considered necessary in the circumstances.

In my opinion these financial statements present fairly the financial position of the Board as at March 31, 1973, and its maintenance expenditure for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

 C. A.
Deputy Provincial Auditor.

EASTERN ROCKIES FOREST CONSERVATION BOARDBALANCE SHEET *AS AT MARCH 31, 1973

(with comparative figures)

<u>ASSETS</u>	<u>1973</u>	<u>1972</u>
Workmen's Compensation Board deposit	\$ 5,216.69	\$ 5,154.25
Value of loose tools and equipment transferred to the Province of Alberta as at April 1, 1959	173,496.38	173,496.38
Capital improvements and works	<u>5,716,615.20</u>	<u>5,716,615.20</u>
	<u>\$5,895,328.27</u>	<u>\$5,895,265.83</u>

LIABILITIES

Government of Canada and Government of the Province of Alberta equity, Statement C	<u>\$5,895,328.27</u>	<u>\$5,895,265.83</u>
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The accompanying notes are part of these financial statements.

This is the Balance Sheet referred to in my report of May 31, 1973, addressed to the Eastern Rockies Forest Conservation Board.

 C. A.
Deputy Provincial Auditor.

* Notes 1, 2 and 3

EASTERN ROCKIES FOREST CONSERVATION BOARDSTATEMENT OF MAINTENANCE EXPENDITURE *FOR THE YEAR ENDED MARCH 31, 1973

(with comparative figures)

	<u>1973</u>	<u>1972</u>
Maintenance expenses:		
Salaries	\$ 786,119.39	\$ 729,421.08
Wages	146,659.14	134,780.52
Equipment and motor vehicle expense	116,877.59	114,079.83
Rentals	75,490.02	41,064.12
Maintenance, material and operation expense	48,156.16	28,510.49
Heat, light and power	18,258.30	19,393.43
Administration and general expense	10,772.99	14,309.38
Travelling	8,901.77	7,933.72
Freight, express and cartage	4,726.92	1,544.31
Telephone and telegraph	1,434.79	946.48
Honorarium	1,000.00	1,000.00
Pensions	228.64	206.56
Postage	113.96	179.53
Advertising	54.00	25.00
	<u>\$1,218,793.67</u>	<u>\$1,093,394.45</u>
Automobiles, trucks and mobile equipment	979.79	76,235.04
Furnishings, equipment and tools	<u>8,723.70</u>	<u>3,814.79</u>
	<u>\$1,228,497.16</u>	<u>\$1,173,444.28</u>
Provided by:		
Appropriations 1815, 1819 and 1821	<u>\$1,228,497.16</u>	<u>\$1,173,444.28</u>

* Note 4

EASTERN ROCKIES FOREST CONSERVATION BOARD
STATEMENT OF GOVERNMENT OF CANADA AND GOVERNMENT
OF THE PROVINCE OF ALBERTA EQUITY

AS AT MARCH 31, 1973

(with comparative figures)

	<u>1973</u>	<u>1972</u>
Balance at beginning of year	\$5,895,265.83	\$5,895,641.78
Add:		
Workmen's Compensation Board deposit interest	<u>216.69</u>	<u>154.25</u>
	\$5,895,482.52	\$5,895,796.03
Deduct:		
Workmen's Compensation Board interest remitted	<u>154.25</u>	<u>530.20</u>
Balance at end of year	<u>\$5,895,328.27</u>	<u>\$5,895,265.83</u>

EASTERN ROCKIES FOREST CONSERVATION BOARD

NOTES TO THE FINANCIAL STATEMENTS

MARCH 31, 1973

Note 1 Total capital expenditures from inception to March 31, 1955, amounting to \$6,278,906.10 were made from funds provided by the Government of Canada (as authorized under Section 8(a) of the Memorandum of Agreement set forth in the Schedules to Chapter 59, Statutes of Canada 1947, and Chapter 20, Statutes of Alberta, 1948, and amendment Acts, 1957) for the location and construction of forest improvements, the making of a forest inventory, reforestation, and such other works and services as the Board considered necessary in that area of the East Slope of the Rocky Mountains forming part of the watershed of the Saskatchewan River, as more definitely described in the Appendices to the Acts. The total expenditure was not to exceed \$6,300,000.00 during the seven years ended March 31, 1955.

Note 2 The Board has suspended operations effective March 31, 1973, pursuant to Section 23 of the Memorandum of Agreement which provides for termination of the Agreement at the end of twenty-five years from the date of commencement.

Note 3 Section 20 of the Memorandum of Agreement provides that upon termination of the Agreement:

- (a) All improvements or works resulting from the carrying out of the programs of the Board shall belong to the Province.
- (b) All other property acquired by the Board shall belong to the Province.

Note 4 The total amount expended by the Board was provided by the Government of the Province of Alberta in accordance with Section 2(a)(ii) of the Memorandum of Agreement dated June 17, 1953, between the Government of Canada and the Government of the Province of Alberta as set forth in the Schedules to Chapter 41, Statutes of Canada, 1952, and Chapter 36, Statutes of Alberta, 1953.

The remuneration and expenses of members of the Board were paid by the Governments of Canada and the Province of Alberta in accordance with Section 2(b)(iii) of the Memorandum of Agreement. The amounts paid by the Province of Alberta, including the honorarium of \$1,000.00 to A. T. Baker, have been incorporated into the Statement of Maintenance Expenditure.

Date Due

CIRC AP 30 '75	APR 05 RETURN	
JUN 2 RETURN		
CIRC SE 8 '75		
SEP 9 RETURN		
NOV 12 RETURN		
CIRC FEB 20 '76		
FEB 9 RETURN		
CIRC NOV 22 '76		
NOV 24 RETURN		
CIRC JAN 2 '8 '77		
JAN 28 RETURN		
CIRC FEB 20 '77		
FEB 6 RETURN		
<u>DUE CAM</u> MAR 29 '81		
DUE CAM APR 05 '81	2	

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EASTERN ROCKIES FOREST
CONSERVATION BOARD

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